Chapter 4: State and Tribal Efforts

State and tribal partners receiving PCSRF funding have conducted a multitude of on-the-ground projects aimed at restoring and maintaining healthy salmon populations. The states and tribes leverage PCSRF funds to support staff that plan, design, and implement habitat restoration activities on a large scale. Under their MOUs with NMFS, Washington, Oregon, California, and Idaho are required to provide a 25% state match on PCSRF funds. All have done so, with Washington, Oregon and California providing close to or more than a 50% state match since program inception. Funds have been allocated to projects focused on enhancing the availability and restoring the quality of salmon habitat, improving management practices, and maintaining healthy and sustainable salmon stocks.

This chapter provides an overview of the activities and accomplishments of states and tribes to restore and conserve salmon populations. The following sections describe the types, numbers, and locations of projects and funding allocated. Additionally, examples of state and tribal activities using the PCSRF resources and the differences they are making are described in sidebars.

Washington

The state of Washington distributes its PCSRF funds and state matching funds through the Washington Salmon Recovery Funding Board, using a competitive grant distribution process based on assessed needs and priorities for salmon recovery. The majority of Washington's PCSRF and state match funds are allocated to habitat protection and restoration projects. Exhibit 4-1 depicts the distribution of funds by objective for projects in the state from FY 2000–2005.

Washington committed more than $140 million in PCSRF funds toward salmon recovery projects as of March 2006. These federal funds were supplemented by nearly $69 million in state salmon conservation and restoration funds (49% state match on PCSRF funds). Through the projects implemented with the PCSRF and state matching funds since 2000, Washington has accomplished the following:

- Removed 180 fish passage barriers opening 240 stream miles through culvert removal and 256 stream miles through other barrier removal
- Restored 126 miles of instream habitat
- Installed 421 fish screens
- Treated 234 miles of road and restored 9,721 acres of upland habitat
- Restored 123 stream miles and 1,646 acres of riparian habitat
- Restored 292 acres and created 41 acres of wetland habitat
- Restored 2825 acres and created 2,385 acres of estuarine habitat
- Restored 317 acres of riparian habitat and treated 1,099 acres of estuarine habitat for invasive species
- Protected 12,128 acres and 147 stream miles through land acquisition, easement, or lease

The locations of state and tribal PCSRF projects in Washington are shown in Exhibit 4-2. More information about Washington's salmon conservation and restoration efforts is available from the Governor's Salmon Recovery Office at http://www.governor.wa.gov/gsro/ and from the Salmon Recovery Funding Board at http://www.iac.wa.gov/srfb/.

Exhibit 4-1: Washington Distribution of PCSRF and State Matching Funds FY 2000-2005

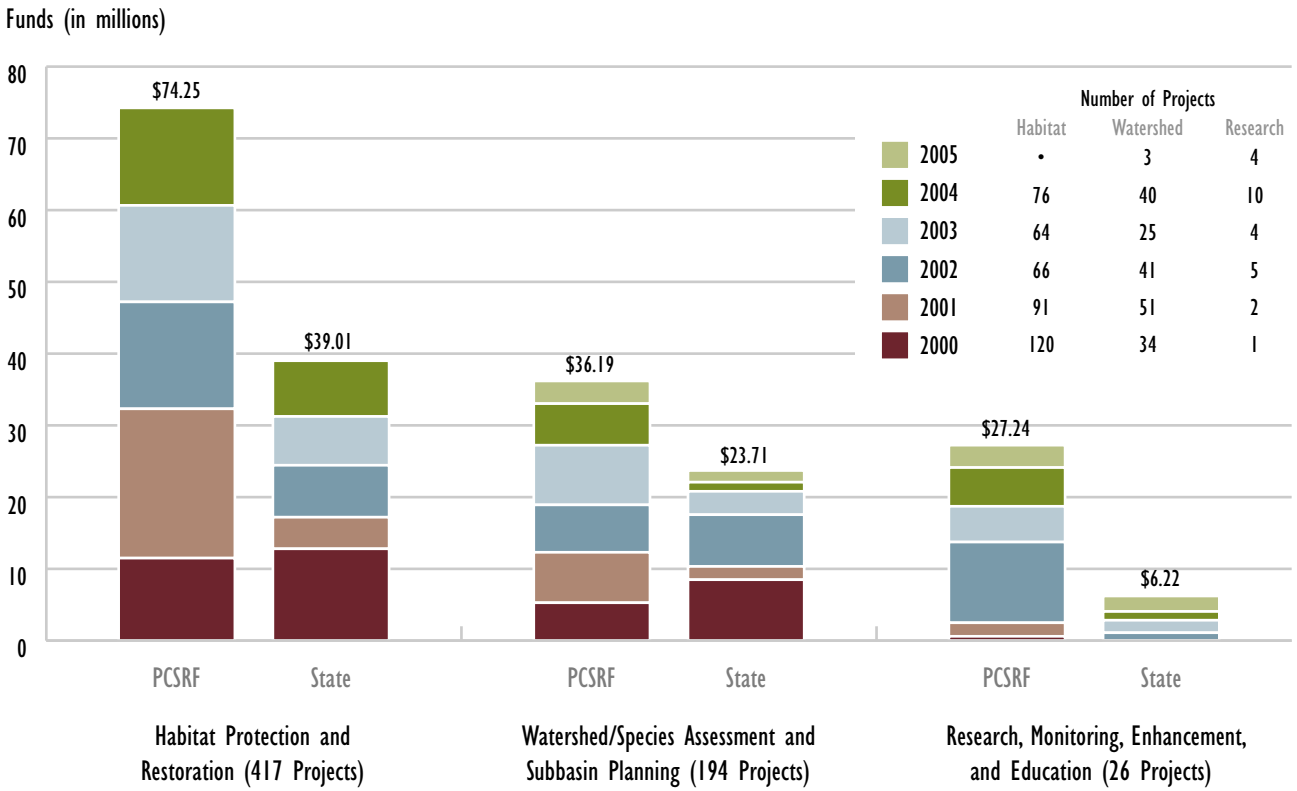
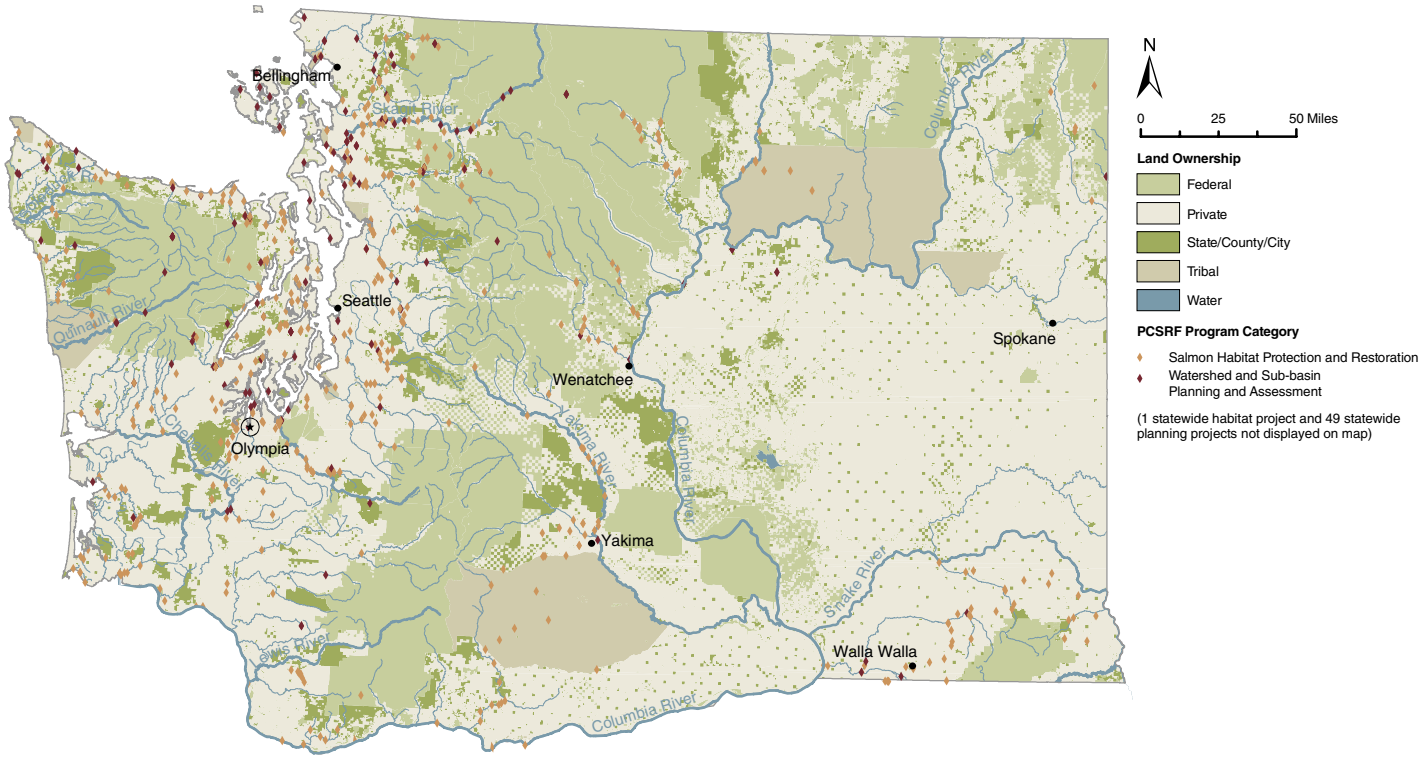


Exhibit 4-2: Locations of PCSRF Projects in Washington



Washington: Asotin Creek Instream Habitat Restoration

Asotin Creek is a tributary to the Snake River and drains approximately 325 square miles of Asotin and Garfield counties in southeastern Washington. Through PCSRF funds distributed by the Washington State Salmon Recovery Funding Board, the Asotin County Conservation District restored 25 acres of instream habitat in Asotin Creek that had been degraded by years of erosion and flooding. Completed in 2005, the restoration activities entailed recreating sinuous channels and natural meanders in the streambed and planting native vegetation along the streambank to create suitable habitat for salmon and steelhead. The restored areas will help support salmon spawning, migration, and juvenile rearing by controlling instream flows and future erosion.

During

Before

After

Oregon

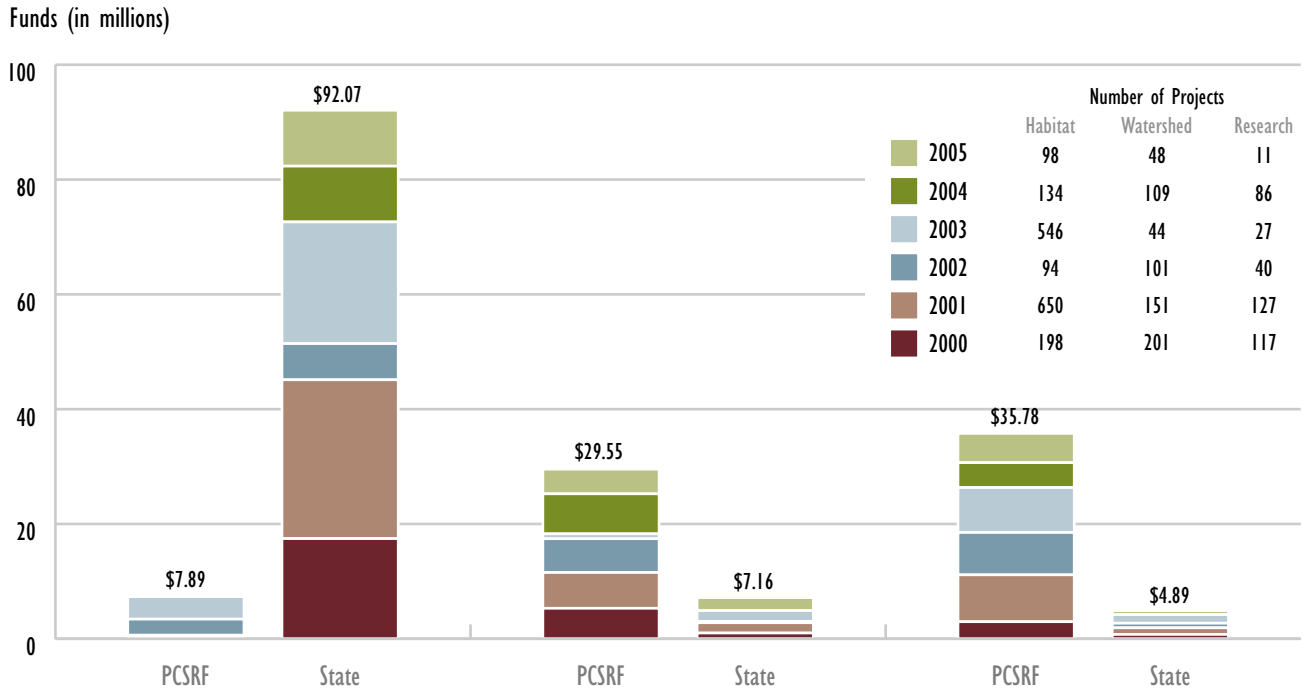
The state of Oregon distributes its PCSRF and state matching funds through a competitive grant program administered by the Oregon Watershed Enhancement Board (OWEB). Under Oregon state law, the majority of state salmon recovery funding must be allocated to habitat restoration and protection projects in Oregon. As a result, OWEB designates most of its PCSRF funds to associated activities complementing habitat restoration and recovery efforts. Projects and programs supported through the PCSRF include recovery planning; watershed councils; watershed assessments; and monitoring of fish populations, habitat conditions, and the effectiveness of restoration activities.

As of March 2006 Oregon committed approximately $73 million in PCSRF funds and $104 million in state matching funds for salmon recovery efforts (142% state match). Exhibit 4-3 shows the distribution of funds in Oregon from FY 2000-2005. The locations of state and tribal PCSRF projects in Oregon are shown in Exhibit 4-4.

State and PCSRF resources supported the following salmon recovery achievements contributing to the overall improvement of habitat conditions in Oregon necessary for the survival of salmon:

» Restored 433 miles of instream habitat
» Removed 1,049 fish passage barriers opening 939 stream miles through culvert removal and 1,173 stream miles through other barrier removal

Exhibit 4-3: Oregon Distribution of PCSRF and State Matching Funds FY 2000-2005

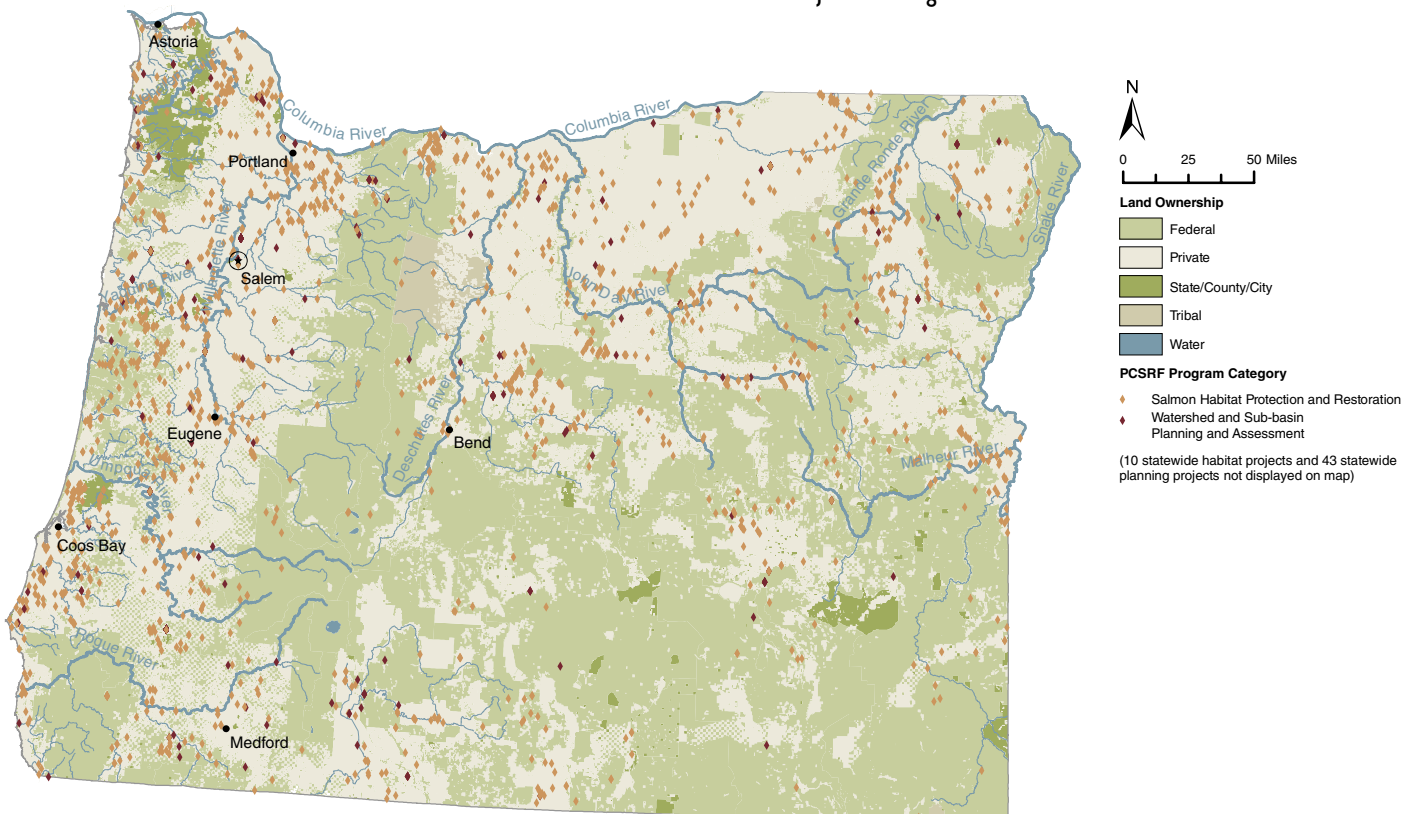


Habitat Protection and Restoration (1720 Projects)

Watershed/Species Assessment and Subbasin Planning (654 Projects)

Research, Monitoring, Enhancement, and Education (408 Projects)

Exhibit 4-4: Locations of PCSRF Projects in Oregon



- Returned 424 cubic feet per second of instream flow to rivers and streams in the state
- Restored 254,704 acres of upland habitat and treated 21,206 miles of road
- Restored 8,366 acres and 2,551 stream miles of riparian habitat
- Restored 10,221 acres and created 1,870 acres of wetland habitat
- Treated 6,889 acres of riparian habitat for invasive species
- Protected 49,589 acres and 146 stream miles through land acquisition, easement or lease

More information about Oregon's salmon conservation and restoration efforts is available at the Oregon Plan for Salmon and Watersheds Website at http://www.oregon-plan.org/ and from OWEB at http://oregon.gov/OWEB/.

Oregon: Technical Assistance Projects

One of Oregon's unique uses of the PCSRF funds is the provision of technical assistance to grant applicants to enhance the quality of restoration projects. During FY 2004–2005 Oregon allocated about 25% of its PCSRF funding to provide local technical assistance. Since 2000, the state allocated approximately $7.4 million in PCSRF funds toward activities such as project design, engineering and construction plans. The technical assistance ensures projects are of high quality and possess a high likelihood of success. The technical assistance function has helped Oregon move a larger number of projects through the grant funding cycle. Continued growth of the state's primary capital project fund source—the Oregon Lottery—has provided the opportunity to increase the number and size of on-the-ground projects. Typical projects benefiting from technical assistance include urban impact reduction, stream corridor rehabilitation, fish passage improvement, and riparian, instream and wetland improvements.

Technical Assistance: Scappoose Bay Fish Passage Project

Before

After

California

California distributes its PCSRF funds together with state matching funds through a competitive grant program managed through the California Department of Fish and Game (CDFG). The majority of PCSRF and state matching funds for California are directed to habitat restoration and protection projects primarily in the coastal regions of the state because they are critical to salmon survival and productivity.

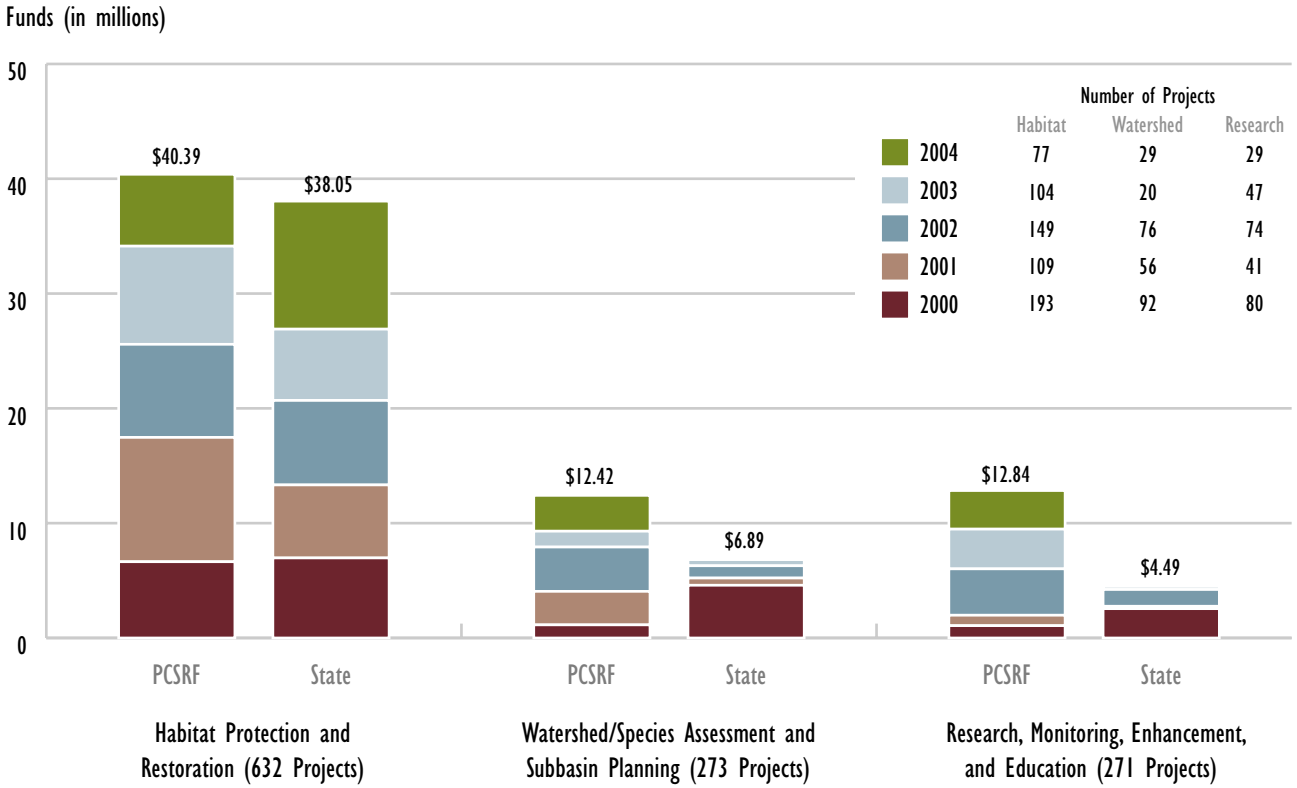
Exhibit 4-5 shows that approximately $65 million in PCSRF funds and $49 million in state match funds from FY 2000-2004 were committed to salmon conservation and restoration activities (60% state match). California's competitive grant distribution process ends in June of the year following receipt of PCSRF funds. The FY 2005 fund commitments are not included in this Report. California initiated the committing of FY 2005 PCSRF funds in February 2006, and will complete the process in June 2006.

Since FY 2000, through the programs and activities enacted through PCSRF and state funds, California has accomplished the following in its efforts to increase and improve salmon habitat:

- Removed 294 fish passage barriers opening 389 miles through culvert removal and 75 miles through other barrier removal
- Restored 57 miles of instream habitat
- Treated 874 miles of road and restored 659 acres of upland habitat
- Restored 273 acres and 130 stream miles of riparian habitat
- Protected 26,258 acres through land acquisition, easement or lease

Exhibit 4-6 shows the location of state and tribal projects funded by PCSRF and state matching funds in California.

Exhibit 4-5: California Distribution of PCSRF and State Matching Funds FY 2000-2004



California: Van Duzen River Riparian Habitat Restoration

In 2003, the California Department of Fish and Game (CDFG), with a collaboration of governmental agencies, watershed groups, and private companies, used PCSRF funds to address and restore a 600-foot long by 18-foot high rapidly eroding bank along the Van Duzen River owned by Humboldt County Parks. Members of the collaborative stakeholder group included Humboldt County Parks, the Eel River Watershed Improvement Group, Pacific Lumber Company, Environmental Restoration Services, California Department of Fish and Game, California Conservation Corps, and the Natural Resources Conservation Service.

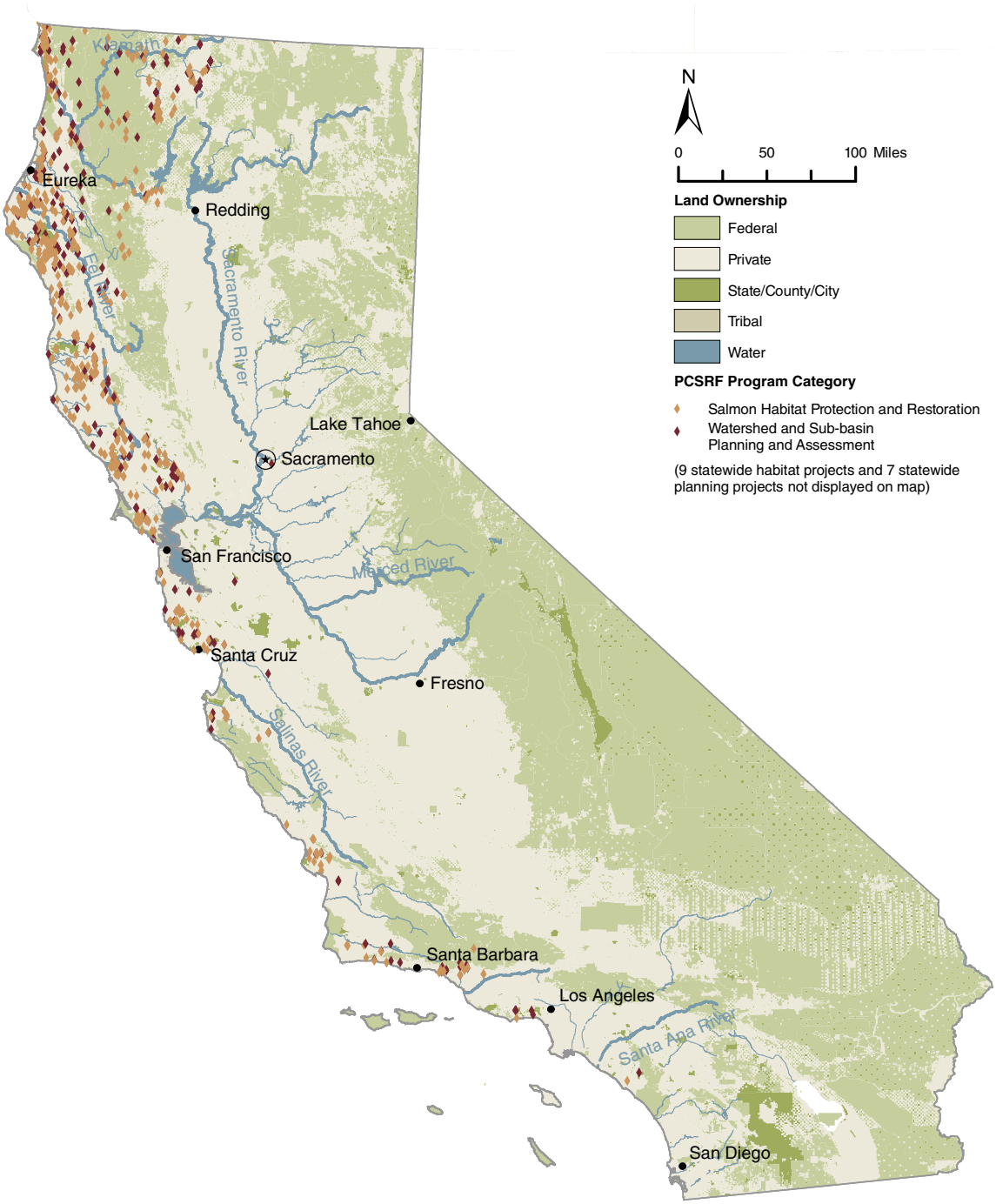
The degraded bank contributed to excessive sediment in the river, concentrating instream flow on a length of river bank that lacked natural vegetation. This in turn resulted in repeated riverbank failure and loss of old growth redwoods, further deteriorating the watershed.

The restoration efforts along the riverbank involved securing large wood and positioning boulders to slow water velocities and trap sediment. Since completion, trapped sediment is rebuilding the once eroding bank and providing substrate for native riparian plant and tree species. The secured logs have promoted the scouring of deep pool habitat which is utilized by both adult and juvenile salmonids as they migrate up and downstream. In 2005, additional boulder work was completed to protect the upstream end of the bank and help retain critical large instream wood.

The photo on the left was taken in April 2003 showing the eroding stream bank and lack of riparian vegetation. The photo on the right was taken in December 2005 showing increased riparian vegetation.

The photo on the left was taken in April 2003 showing vulnerable bank and cover habitat provided by the logs. The photo on the right was taken in December 2005 showing more stabilized banks.

Exhibit 4-6: Locations of PCSRF Projects in California



Idaho

The state of Idaho administers the PCSRF funds for salmon recovery projects through the Office of Species Conservation (OSC). Since inception in FY 2004, the Idaho OSC has committed approximately $8.7 million in PCSRF funds and $3.1 million in state matching funds to PCSRF projects (36% state match). The majority of funds have been directed toward salmon habitat protection and restoration projects in Idaho. Exhibit 4-7 depicts the distribution of funds in Idaho from FY 2004-2005.

Idaho PCSRF projects have achieved the following to improve the quality and quantity of habitat available to salmon:

- Removed 40 fish passage barriers opening 139 stream miles through culvert removal and 159 stream miles through other barrier removal
- Returned 234 cubic feet per second of instream flow to stream and rivers in the state
- Treated 66 miles of road and restored 1,525 acres of upland habitat
- Restored 450 acres of riparian habitat
- Protected 1,800 acres of habitat through land acquisition, easement, or lease

The location of state and tribal projects in Idaho is shown in Exhibit 4-8. More information about Idaho's salmon and steelhead recovery efforts is available at http://osc.idaho.gov/list/salmon_steelhead.html.

Exhibit 4-7: Idaho Distribution of PCSRF and State Matching Funds FY 2004-2005

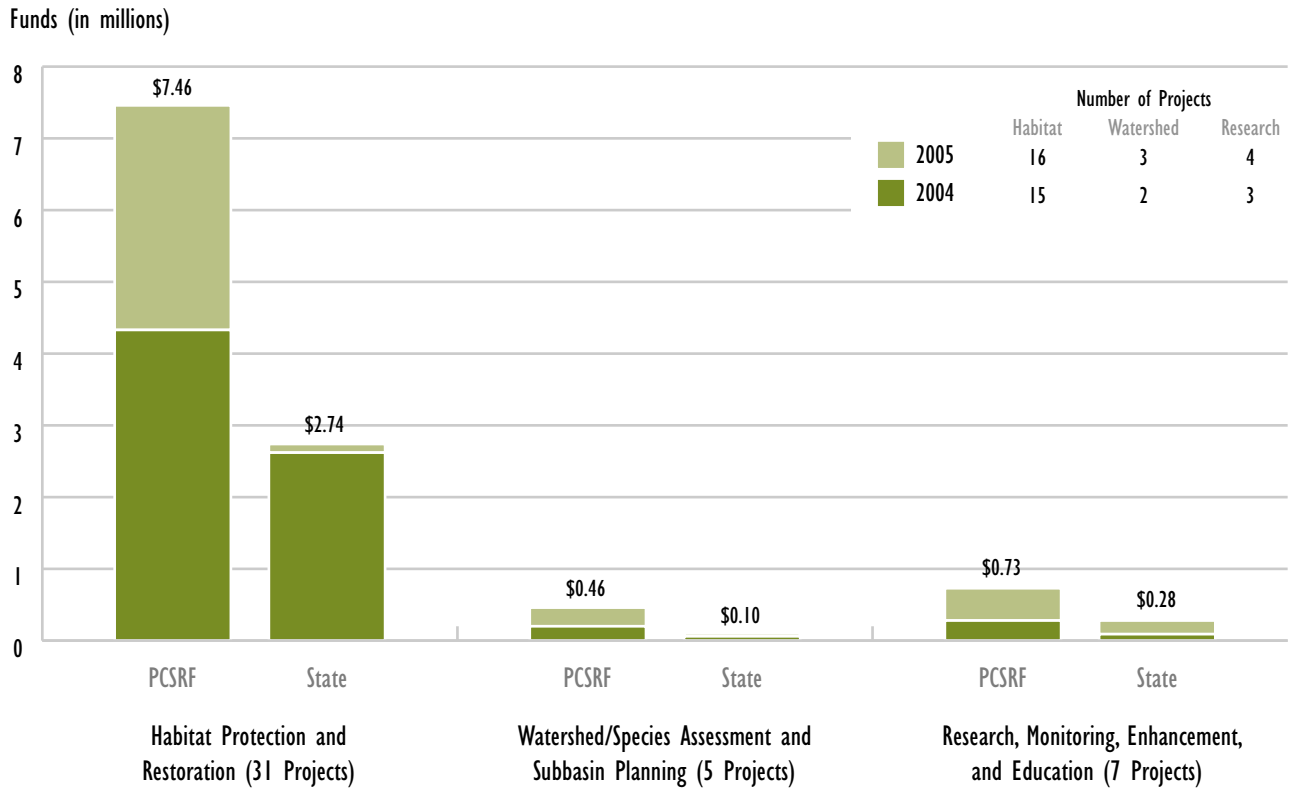
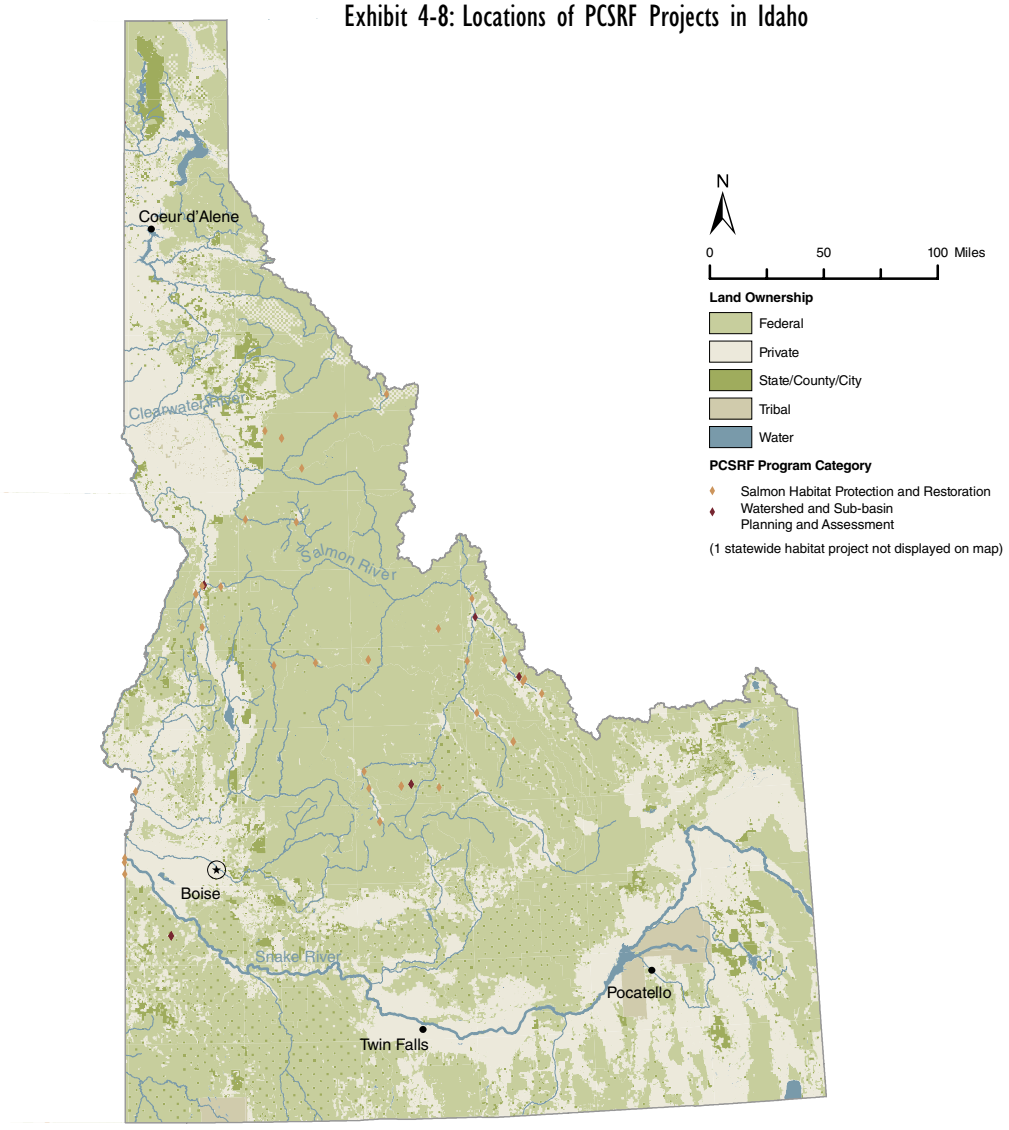


Exhibit 4-8: Locations of PCSRF Projects in Idaho



Idaho: Pahsimeroi River Watershed

With PCSRF support, The Nature Conservancy (TNC) purchased a 1,800 acre ranch in the Pahsimeroi Valley to protect a vital stretch of river, where approximately 40% of the Pahsimeroi's Chinook salmon spawning currently occurs. The Idaho Office of Species Conservation provided $1,300,000 of PCSRF funds to TNC toward the acquisition of the $3,350,000 ranch. The grant acted as the catalyst to create a partnership with the Idaho Department of Fish and Wildlife which secured a $640,000 grant from the US Fish and Wildlife Service to purchase 200 acres of riparian habitat on the ranch. The various partners, including private ranchers, are working together to provide public access, manage grazing allotments, and promote the health of the river corridor by removing fish migration barriers, implementing water conservation measures, protecting sensitive riparian areas, and preventing habitat fragmentation. The project demonstrates how fish habitat conservation can be compatible with a viable family agricultural operation.

Alaska

The state of Alaska, through the Alaska Department of Fish and Game (ADFG), allocates the PCSRF funds and the state matching funds primarily toward research, monitoring, enhancement, and education projects. There are no ESA-listed salmon populations in Alaska, so PCSRF projects are established to help provide for the sustainability of Alaska's salmon resources and salmon habitat. This includes support for salmon-dependent communities in Alaska.

Many of Alaska's PCSRF funds have been Congressionally earmarked and directed toward specific projects that have included education, watershed assessment and planning, habitat restoration, research and monitoring, and stock enhancement. From FY 2000-2005, ADFG committed approximately $97.3 million in PCSRF funds and $10.6 in state matching and in-kind funds. The distribution of funds is shown in Exhibit 4-9.

Projects funded with FY 2000-2005 PCSRF and state matching funds in Alaska have contributed to maintaining sustainable fisheries and improving management practices. Projects have:

» Restored 3,877 acres of wetland habitat
» Monitored 7,180 stream miles through research, monitoring, and evaluation projects.
» Marked 188 million hatchery fish for stock management
» Incorporated 481 research findings to make Pacific Salmon Treaty abundance-based management decisions.

The location of projects throughout Alaska is shown in Exhibit 4-10. More information about Alaska's salmon recovery efforts is available at http://www.adfg.state.ak.us/special/sssf.php.

Exhibit 4-9: Alaska Distribution of PCSRF and State Matching Funds FY 2000-2005

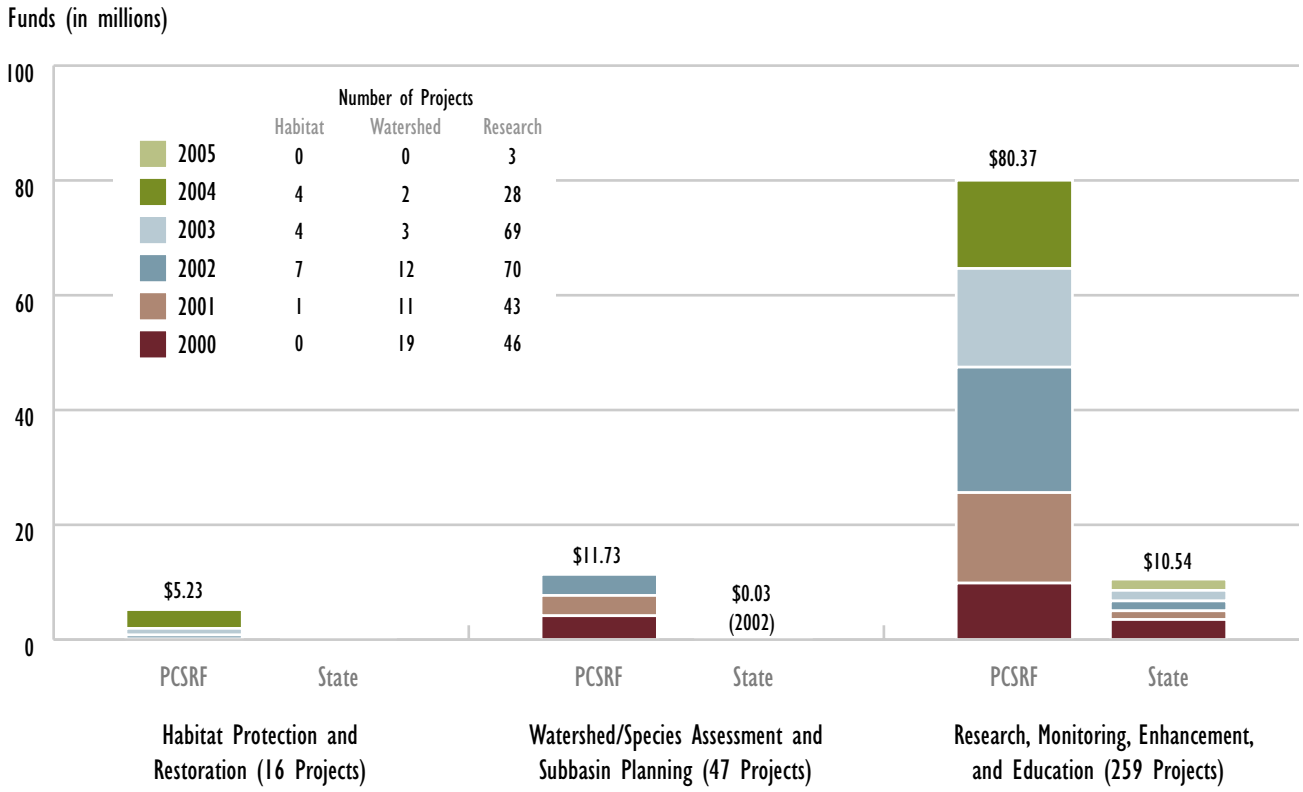
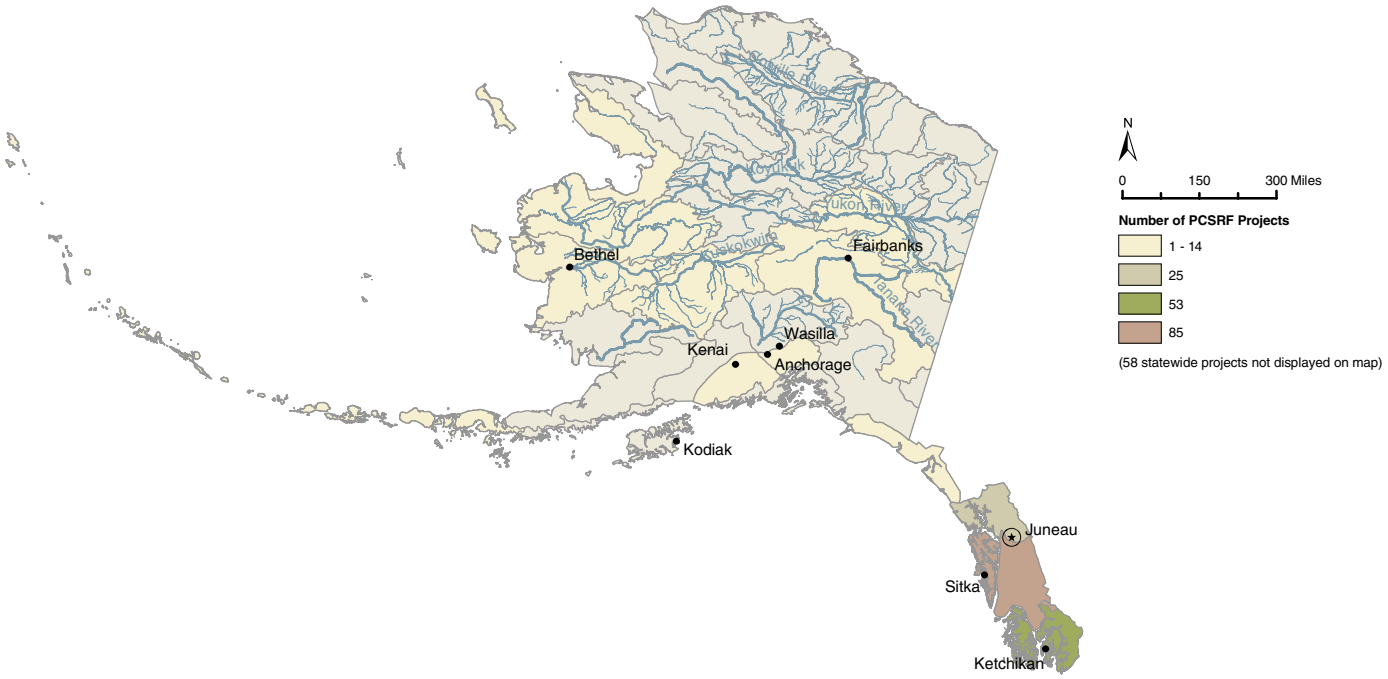


Exhibit 4-10: Locations of PCSRF Projects in Alaska



Alaska: Wild Salmon Education

The publication "Alaska's Wild Salmon" is the centerpiece for the Alaska Department of Fish & Game aquatic and salmon education program. The publication is an educational tool appropriate for middle and high school students; media, policy makers, salmon fishery organizations, and other stakeholders both within and outside of Alaska. The comprehensive publication provides a thorough understanding of Alaska's sustainable salmon resources and their long-standing importance to the culture, economy, communities, ecosystems, and health of Alaskans. The publication includes chapters on salmon biology, salmon habitat, salmon management and research, and the harvest and use of salmon resources.

"Alaska's Wild Salmon" was completed in the fall of 2002. A total of 50,000 copies were produced in two printings, with approximately 70% distributed to educators. All Anchorage School District high school students are using the publication as part of the mandatory Alaska Studies curriculum. A Teachers Guide, completed in 2004, is posted online and is used by educators to accompany the book. The guide is available at http://www.sf.adfg.state.ak.us/statewide/AquaticEd/adfgteacherguide/home.html.

Columbia River Tribes

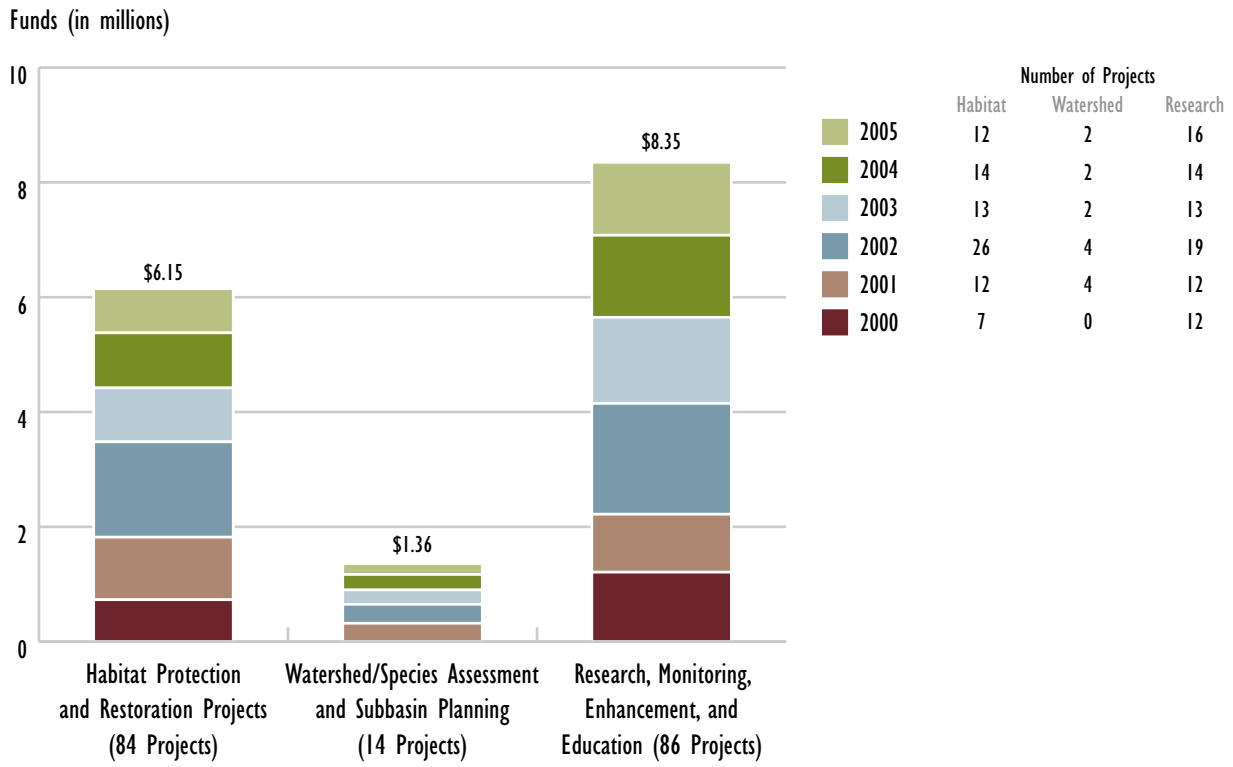
PCSRF provides direct funding to Columbia River tribes including four Columbia River Inter-Tribal Fish Commission (CRITFC) member tribes, the Colville Confederated Tribes, and the Shoshone-Bannock Tribes. CRITFC acts as a technical support and coordinating agency and administers PCSRF funds for the Nez Perce Tribe, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation of Oregon, and the Confederated Tribes and Bands of the Yakama Nation.

As of March 2006, the Columbia River tribes have committed approximately $15.8 million in PCSRF funds, with projects split about equally between habitat protection and restoration projects and research, monitoring, enhancement, and education projects in the Columbia River basin. Exhibit 4-11, displays the distribution of PCSRF funds for the Columbia River tribes in Washington, Oregon, and Idaho.

The Columbia River tribes have conducted the following activities to improve habitat conditions for salmon through the PCSRF funded projects since FY 2000:

- Removed 34 fish passage barriers opening 103 stream miles through culvert removal and 146 stream miles through other barrier removal
- Restored 74 miles of instream habitat
- Restored 1,030 acres and 251 stream miles of riparian habitat
- Restored 100 acres of wetland habitat
- Treated 425 acres of riparian habitat for invasive species
- Protected 12,033 acres of habitat through land acquisition, easement or lease

Exhibit 4-11: Columbia River Tribes Distribution of PCSRF Funds FY 2000-2005



Columbia River Tribes: Nason Creek Wetlands Acquisition Project

The Confederated Tribes and Bands of the Yakama Nation, one of the Columbia River Inter-Tribal Fish Commission (CRITFC) tribes, allocated PCSRF funds for the purchase of a 26-acre beaver dam wetlands complex of the Nason Creek floodplain within the Wenatchee River Subbasin in Washington. The acquisition will allow the Yakama Nation Fisheries personnel to protect, enhance and manage the site to provide for salmon passage to spawning areas and over-winter rearing habitat for coho salmon, steelhead, and ESA-listed spring Chinook salmon. Due to the development of the river corridor, the loss of off-channel habitat has been identified as a limiting factor to these ESA-listed fish in the Wenatchee Sub-basin Plan.

No beaver dams will be removed in the project area. Through management of the beaver dams and water levels, adult migration through the property at appropriate times will be possible. Alternative methods such as notches, culverts, fish ladders, and weirs will allow upstream access. Approximately 3 miles of spawning and rearing habitat will be made accessible.

In coordination with the cooperating agencies of Washington Department of Fish and Wildlife and the Chelan Public Utility District, stream channel and riparian habitat monitoring and evaluation (M&E) will be conducted by Yakama Nation Fisheries personnel over the length of the entire site. Spawning ground surveys of returning adult salmon utilizing the new habitat started in the fall of 2005. Data collection beginning in mid 2006 will include snorkel surveys to estimate juvenile salmonid populations.

Pacific Coastal Tribes

The PCSRF funds for Pacific Coastal tribes have been distributed to 29 tribes and their tribal commissions along the Pacific Coast in Washington, Oregon, and California. The PCSRF funding has been distributed to the Northwest Indian Fisheries Commission (NWIFC) on behalf of 20 western Washington treaty Indian tribes[10]; to the Klamath River Inter-Tribal Fisheries and Water Commission (KRITFWC) on behalf of four Klamath River Basin tribes (Hoopa Valley Tribe, The Karuk Tribe of California, Yurok Tribe, and The Klamath Tribes); and to the Round Valley Indian tribes in the Eel River Basin in California; the Confederated Tribes of the Chehalis Reservation in Washington; the Coquille Indian Tribe in Oregon; the Confederated Tribes of Grand Ronde in Oregon; and the Confederated Tribes of the Siletz Indians of Oregon.

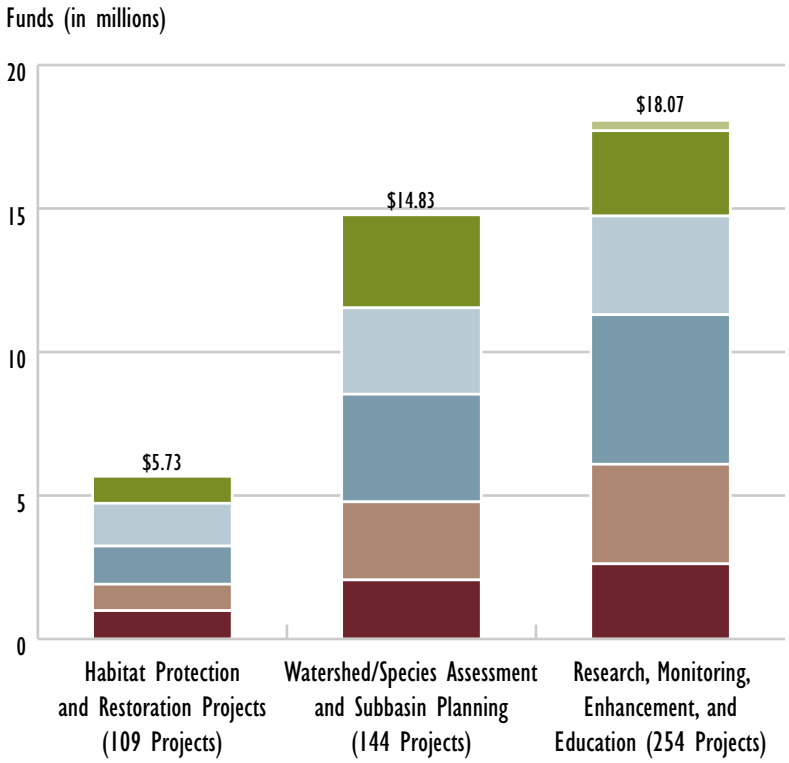
The Pacific Coastal tribes committed approximately $38.6 million in PCSRF funds toward salmon conservation and recovery as of March 2006. Most of the funds were allocated toward research, monitoring, enhancement, or outreach projects in Puget Sound and the Klamath River basin. Coordination, planning, and research and monitoring conducted by the tribes with PCSRF resources are essential elements of successful habitat restoration efforts. The distribution of funds is displayed in Exhibit 4-12.

The Pacific Coastal tribes have contributed the following to improve habitat conditions for salmon through PCSRF funded projects since FY 2000

- Removed 79 fish passage barriers, opening 47 stream miles through culvert removal
- Restored 282 miles of instream habitat
- Treated 42 miles of road and restored 92 acres of upland habitat
- Restored 747 acres and 113 stream miles of riparian habitat
- Restored 129 acres of estuarine habitat
- Protected 288 acres of habitat through land acquisition, easement, or lease.

[10] Nisqually, Squaxin Island, Puyallup, Jamestown S'Klallam, Port Gamble S'Klallam, Lower Elwha Klallam, Skokomish, Swinomish, Sauk-Suiattle, Upper Skagit, Tulalip, Makah, Stillaguamish, Muckleshoot, Suquamish, Nooksack, Lummi, Hoh, Quinault, and Quileute tribes.

Exhibit 4-12: Pacific Coastal Tribes Distribution of PCSRF Funds FY 2000-2005



	Number of Projects		
	Habitat	Watershed	Research
2005	1	1	8
2004	16	28	49
2003	22	29	52
2002	29	41	59
2001	26	26	53
2000	15	19	33

Pacific Coastal Tribes: Jimmy Come Lately Creek Restoration

The PCSRF and the Washington State Salmon Recovery Funding Board (SRFB) have supported planning and design, land acquisition, and construction for the restoration of Jimmy Come Lately Creek and its South Sequim Bay Estuary led by the Jamestown S'Klallam Tribe through a cooperative, multi-agency effort.

Located on the Olympic Peninsula in Washington State, Jimmy Come Lately Creek and South Sequim Bay Estuary faced significant land and stream channel alterations, contributing to increased flooding and declining salmon populations. Project implementation started with the acquisition of 25 acres of land at the mouth of the creek. Creek restoration entailed excavation of a new sinuous channel to relocate the riverbed into a historic channel, construction of a new Hwy 101 bridge, and re-vegetation of riparian areas with native trees and shrubs. Estuary restoration included removal of a log yard, two roads, and fill and structures from three other properties that constricted natural streamflow and tidal processes. These efforts will allow for the regrowth of natural eelgrass beds and salt marshes critical for salmon survival. Major construction was completed in 2005.

With the natural floodplain and salt marsh connection restored, Jimmy Come Lately Creek will provide essential freshwater and marine habitat for coho salmon, steelhead, and ESA-listed summer chum salmon. PCSRF funding will also support continued monitoring of the project to quantify the increase in local salmon abundance and ensure the effort produces the intended results.